



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,171	11/20/2000	Pierre Dupuy	Q61862	6878

23373 7590 03/23/2006
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

IQBAL, KHAWAR

ART UNIT PAPER NUMBER

2617

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/715,171	Applicant(s) DUPUY, PIERRE	
	Examiner Khawar Iqbal	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 17 and 18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 17 and 18 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: a method for performing a conversion between transmission on a radio interface where messages of variable size are sent or received at fixed and regular time intervals and with a variable rate, and transmission on terrestrial interfaces using fixed rate channels, the method comprising transmitting on said terrestrial interfaces said messages of variable size to be sent or received on said radio interface, following each other without any time interval between each other, instead of at fixed and regular time intervals, so as to optimise use of available bandwidth on said channels. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, claims 17 and 18 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2686

3. Claim 13 are rejected under 35 U.S.C. 102(e) as being unpatentable by Karlsson (6222829).

Regarding **claim 13** Karlsson teaches a relay device for transmission apparatus, the relay device comprising (figs. 1-3):

Means for receiving data messages formatted in first protocol from a transmitted (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming 64kb/s, outgoing 5300 b/s);

Means for converting the data message formatted in the first protocol into data messages formatted in a second protocol (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26); and

Means for transmission the data messages formatted in the second protocol to another relay over a transmission channel having a limited data rate associated with said second protocol to transmission in circuit mode, wherein the data message formatted in the second protocol include data message of different lengths (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming 64kb/s, outgoing 5300 b/s).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2686

5. Claims 1-2,4-7,9-13 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Kaaresoja (6556573) and further in view of Karlsson (6222829).

6. Regarding **claim 1** Kaaresoja teaches a transmission apparatus comprising (figs. 1-6);

a first relay receiving data messages formatted in a first protocol from a transmitter and converting the data messages formatted in the first protocol into data messages formatted in a second protocol (col. 5, lines 48-61, col. 8, lines 2-6, col. 13, lines 2-27),

a second relay connected to the first relay and receiving the data messages formatted in the second protocol from the first relay and transmitting the data messages formatted in the second protocol in a synchronous mode to a receivers (col. 6, lines 35-60),

transmission channel interconnecting the first and second relays and having a limited data rate associated (col.9, lines 10-19, col. 10, line 60-col.11, line 9), wherein, said data messages formatted in said second protocol include data messages of different lengths (col. 6, lines 8-21 and 35-60, col.9, lines 25-62); and

means for transmitting said data messages formatted in said second protocol over said transmission channel in an asynchronous mode (col.5, lines 48-61, see above). Kaaresoja does not specifically teach in detail second protocol to transmission in circuit mode.

In an analogous art, Karlsson teaches second protocol to transmission in circuit mode (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming

Art Unit: 2686

64kb/s, outgoing 5300 b/s). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kaaresoja by specifically adding feature second protocol to transmission in circuit mode in order to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format to circuit mode as taught by Karlsson.

Regarding claim 6 Kaaresoja teaches a transmission method comprising the steps of (figs. 1-6):

receiving, in a first relay, data messages formatted in a first protocol and coming from a transmitter (col. 2, lines 56-65, col. 5, lines 48-61, col. 8, lines 2-6, col. 13, lines 2-27);

converting the data messages way formatted in the first protocol into data messages formatted in a second protocol (col. 2, lines 56-65, col. 5, lines 48-61, col. 8, lines 2-6, col. 13, lines 2-27);

transmitting the data messages formatted in the second protocol to a second relay connected to the to the first relay by a transmission channel having limited data rate associated with said second protocol (col. 9, lines 10-19, col. 10, line 60-col.11, line 9), wherein said data message formatted in said second protocol include data messages having different lengths, and said data message having different lengths are transmitted over said limited data rate transmission channel in an asynchronous mode (col. 6, lines 8-21 and 35-60, col.9, lines 25-62); and

transmitting, in a synchronous mode, the data messages formatted in the second protocol from the second relay to a receiver (col. 5, lines 48-61, see above). Kaaresoja does not specifically teach in detail second protocol to transmission in circuit mode.

In an analogous art, Karlsson teaches second protocol to transmission in circuit mode (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming 64kb/s, outgoing 5300 b/s). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kaaresoja by specifically adding feature second protocol to transmission in circuit mode in order to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format to circuit mode as taught by Karlsson.

Regarding claims 2,7 Kaaresoja teaches wherein the second relay includes a buffer memory configured to store the message received from the first relay and then to transmit the data message to the receiver (col. 8, 45-49).

Regarding claim 4,9,15 Kaaresoja teaches wherein the first protocol has a plurality of data rates for transmitting payload bits, the rate at which the payload bits are transmitted over the limited data rate transmission channel being intermediate in value U between the data rates of the first protocol (col. 9, lines 25-62).

Regarding claim 5,10 Kaaresoja teaches wherein the buffer memory is of the first-in-first-out type (col. 9, lines 25-62).

Regarding claim 11 Kaaresoja teaches wherein said second relay further includes a decoder for receiving instructions for controlling said buffer memory, said

Art Unit: 2686

decoder determining whether a message is unavailable for transmission during a following transmission window based reception date of the message (col. 8, lines 21-50).

Regarding claim 12 Kaaresoja teaches a transmission apparatus comprising (abstract, figs. 1-6);

a first relay receiving data messages formatted in a first protocol from a transmitter and converting the data messages formatted in the first protocol into data messages formatted in a second protocol (col. 5, lines 48-61, col. 8, lines 2-6, col. 13, lines 2-27),

a second relay connected to the first relay and receiving the data messages formatted in the second protocol from the first relay and transmitting the data messages formatted in the second protocol in a synchronous mode to a receivers (col. 6, lines 35-60),

transmission channel interconnecting the first and second relays and having a limited data rate associated with said second protocol (col. 9, lines 10-19, col. 10, line 60-col.11, line 9), wherein, said data messages formatted in said second protocol include data messages of different lengths from a length of a transmission window which would be used for transmission in the synchronous mod over said limited dated rate transmission channel (col. 6, lines 8-21 and 35-60, col.9, lines 25-62); and

means for transmitting said data messages formatted in said second protocol over said transmission channel in an asynchronous mode (col.5, lines 48-61, see

Art Unit: 2686

above). Kaaresoja does not specifically teach second protocol to transmission in circuit mode.

In an analogous art, Karlsson teaches second protocol to transmission in circuit mode (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming 64kb/s, outgoing 5300 b/s). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kaaresoja by specifically adding feature second protocol to transmission in circuit mode in order to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format to circuit mode as taught by Karlsson.

7. Claims 3,8,14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaaresoja (6556573) and further in view of Karlsson (6222829) and Olkkonen et al (6738374).

Regarding claims 3,8,14 and 16 Kaaresoja teaches a relay device for a transmission apparatus, the relay device comprising (figs. 1-6):

means for receiving data messages transmitted in an asynchronous mode over a limited data rate transmission channel, wherein the data messages include data messages of different lengths (col. 6, lines 8-21 and 35-60, col.9, lines 25-62); a buffer memory configured to store the data messages (col. 8, 45-49). Kaaresoja does not specifically teach second protocol to transmission in circuit mode.

In an analogous art, Karlsson teaches second protocol to transmission in circuit mode (col. 2, lines 1-8, col. 3, lines 1-15 and 45-62, col. 4, lines 22-26, incoming

Art Unit: 2686

64kb/s, outgoing 5300 b/s). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kaaresoja by specifically adding feature second protocol to transmission in circuit mode in order to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format to circuit mode as taught by Karlsson.

Kaaresoja and Karlsson do not specifically teach a decoder for receiving an instruction to retransmit the data messages in a synchronous mode to a receiver and for storing the data messages that are to be retransmitted in the buffer memory.

In an analogous art, Olkkonen et al a decoder for receiving an instruction to retransmit the data messages in a synchronous mode to a receiver and for storing the data messages that are to be retransmitted in the buffer memory (col. 8, line 50-col. 9, line13). A speech signal is converted into a parameter group, and then inserted into traffic frames for transmission as a packet, comprising header and payload. The payload is assembled from several traffic frames until essentially full. On receipt at the transmission destination, the speech frames are decoded. The packing of packets may be commenced approximately one second after establishing the connection and after any incorporated pauses. Thus the ending of any pause is speedily transmitted to the receiving listener. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kaaresoja and Karlsson by specifically adding feature for storing the data messages that are to be

retransmitted in the buffer memory in order to enhance data transfer in the different systems purpose of increasing efficiency as taught by Olkkonen et al.

Response to Arguments

Applicant's arguments filed 01-25-06 have been fully considered but they are not persuasive. The examiner has thoroughly reviewed applicant's arguments but firmly believes that the cited references reasonably and properly meet the claimed limitations. In regard to applicant's arguments against Kaaresoja and Karlsson, Karlsson teaches Packet gateway server routes call via a packet data channel of mobile radio network to destination mobile station (130) using a packet data service. It is determined whether destination mobile station can operate in voice mode using circuit switched communications across a traffic channel, so that circuit switched communication is established between mobile radio network and destination mobile station. Otherwise incoming voice call is routed to voice gateway (200) that converts the voice call to data packet for routing to mobile station across an Internet protocol communication network (190) to packet gateway (210) of mobile radio network. Voice gateway server provides an interface for routing voice calls between voice gateway (200) to destination mobile station based on current IP address. The processor 201 associated with the Voice Gateway 200 also converts the incoming voice signal, typically a 64 kbps Pulse Code Modulation (PCM) signal, received from the GMSC 100 to an IP telephony signal using, for example, ITU-T G.723.1 specified speech coding over a User Datagram Protocol/Internet Protocol at 5,300 bps or, alternatively, at 6,300 bps (col. 2, lines 1-8,

Art Unit: 2686

col. 3, lines 1-15 and 45-62, col. 4, lines 22-26). Kaaresoja teaches a synchronous residual time stamp (SRTS) value indicating the timing of a source clocking function is encoded and the SRTS with ATM cell is transmitted using the ATM adaption layer (AAL) to destination, where the SRTS value is decoded. The destination clocking function is synchronized with source clocking function by modifying the destination clocking function according to SRTS value. A variable bit rate ATM adaption layer (AAL) protocol is used to define ATM cell traffic flow from source to destination. In ATM network for cellular communication system for transmitting synchronous time stamp information using ATM adaption layers (AAL2,AAL5) between at least two ATM interfaces. Provides for transmission of **packet** oriented compressed voice data in variable bit rate fashion while providing for synchronization between source and destination. The PCM interface 212 of the IWF 208 should be synchronized with the PCM component 202 of the BTS 200. As previously described, synchronization in AAL1 does not account for the fact that the clock of the voice circuits of the BSS is not connected to the clock of the ATM network. AAL1 is not suitable for transmitting packet-oriented compressed voice data, as it is used exclusively for constant bit rate (CBR) traffic. The SRTS in AAL1 cannot exploit the benefits of the Voice Activity Detection (VAD) function, i.e., variable bit rate (VBR) traffic. The bit rate of coded GSM speech is 16 Kbit/sec, including overhead, when speech is active. This means that the number of bits transmitted in time t is less than the 64 Kbit/sec of PCM by a factor of four, although the clock rate is the same (i.e., 8 Khz). Where AAL1 provides for the measurement and transmission of an SRTS every eighth ATM cell, this factor of four will result in the transmission of a complete SRTS

every other ATM cell for GSM speech (col. 8, lines 21-60, col. 9, lines 10-60). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khawar Iqbal whose telephone number is 571-272-7909.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Khawar Iqbal


ERIKA A. GARY
PRIMARY EXAMINER